

Applicant : Patrizio Vinciarelli et al.
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Attorney's Docket No.: 00614-042002 / Brains Div.

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

13. (currently amended) ~~A power converter control circuit apparatus~~ Apparatus comprising power converter circuitry having first circuitry encapsulated to form a first discrete physical unit and connected to respond to control information received from second circuitry encapsulated in a second discrete physical unit, the two physical units respectively including subparts of a device for conveying said control information via a galvanically isolated electromagnetic path.

Please cancel claims 14 and 25-31 without prejudice.

14. (cancelled).

25-31. (cancelled).

32. (currently amended) The apparatus of claim 13 further comprising: Apparatus for use in power conversion comprising
primary-side circuitry mounted on a primary-side substrate and including a primary-side communicator for sending or receiving said control information used in controlling the power conversion, and
secondary-side circuitry mounted on a secondary-side substrate and including a secondary-side communicator for sending or receiving said control information;
~~at least one of said primary-side and secondary-side~~
~~circuitries including heat dissipating components mounted on a heat dissipation side of~~
~~the corresponding substrate,~~
~~the primary-side and secondary-side substrates each being mounted with the heat~~
~~dissipation side generally facing away from the other substrate.~~

33. (original) The apparatus of claim 32 wherein

said primary-side circuitry includes low power primary-side components mounted on a low-power side of said primary-side substrate, and heat dissipating primary-side components mounted on a heat dissipation side of said primary-side substrate,

said secondary-side circuitry includes low power secondary-side components mounted on a low power side of said secondary-side substrate, and

said low-power sides of said primary-side and secondary-side substrates generally face one another to define an inner space between them with the low power components in the inner space.

34. **(currently amended)** The apparatus of claim 32 wherein said primary-side and secondary-side substrates are held parallel.

35. **(currently amended)** The apparatus of claim 32 wherein the primary-side and secondary-side substrates define an edge of the power converter circuitry ~~apparatus~~ and further comprising conductive terminations along the edge for mounting the power converter circuitry ~~apparatus~~ on a circuit board.

36. (original) The apparatus of claim 32 wherein the primary-side and secondary-side substrates are mechanically separable from one another, galvanically isolated from one another, and configured to be placed in positions relative to one another to enable said primary-side and secondary-side communicators to cooperate to pass said control information.

37. (original) The apparatus of claim 32 wherein said primary-side circuitry includes a primary winding of a transformer and said secondary-side circuitry includes a secondary winding of said transformer said windings being galvanically isolated.

38. **(currently amended)** The apparatus of claim 32 wherein said communicators comprise windings and said control information is passed by electromagnetic coupling between ~~them~~ said windings.

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39. (original) The apparatus of claim 38 wherein said coupling is achieved without a permeable core linking said windings.

Please cancel claims 40 and 41 without prejudice.

40-41. (cancelled).

Please add the following new claims.

42. (new) The apparatus of claim 32 wherein at least one of said primary-side and secondary-side circuitries includes a heat dissipating component mounted on a heat dissipation side of the corresponding substrate.

43. (new) The apparatus of claim 42 wherein each of the primary-side and secondary-side substrates are mounted with the heat dissipation side generally facing away from the other substrate.

44. (new) The apparatus of claim 32 wherein the first circuitry comprises the primary-side circuitry, the first discrete physical unit comprises the primary-side substrate, the second circuitry comprises the secondary-side circuitry, and the second discrete physical unit comprises the secondary-side substrate.

45. (new) The apparatus of claim 32 wherein the second circuitry comprises the primary-side circuitry, the second discrete physical unit comprises the primary-side substrate, the first circuitry comprises the secondary-side circuitry, and the first discrete physical unit comprises the secondary-side substrate.

46. (new) The apparatus of claim 32 wherein the second circuitry is configured and adapted to electronically modulate a carrier signal with said control information, and

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the first circuitry is configured and adapted to generate an electrical signal corresponding to said control information in response to a signal delivered by said second circuitry.

47. (new) The apparatus of claim 32 wherein the second circuitry is configured and adapted to electronically modulate a high frequency carrier signal with said control information, and,

the first circuitry is configured and adapted to generate an electrical signal corresponding to said control information in response to a signal delivered by said second circuitry.